**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously presented) A method for up-interpolating a Bayer mosaic image from input space to output space, said Bayer mosaic image input space comprising a plurality of four-pixel blocks, each pixel in said blocks being one of three different colors with two of said four pixels in each block being a dominant color and the other two of said four pixels being non-dominant colors, said method including the steps of:

reading a two dimensional color plane of said Bayer image for each said color;

mapping said pixels of said dominant color from said input space to said output space by:

multiplying each coordinate of said input space by $1/\sqrt{2}$; and

scaling coordinates of said input space to a normalized coefficient kernel by multiplying said coordinates by $1/\sqrt{2}$;

mapping said pixels of said non-dominant colors by multiplying each coordinate of said input space by 1/2;

for each color, convolving said input space pixels with a coefficient kernel for each color; and

writing all mapped pixels to a storage location.

2. (Original) The method of claim 1 wherein said three different colors are red, green and blue.

3. (Original)The method of claim 1 or 2 wherein said dominant color is green.

4. (Original)The method of claim 1 wherein said coefficient kernel is the same for said two non-dominant colors but different for said dominant color.

5. (Previously presented) The method of claim 1 wherein said mapping step for said dominant color further includes sampling a 4x4 pixel block.

6. (Previously presented)An apparatus for up-interpolating a Bayer mosaic image from input space pixel values to output space pixel values, said Bayer mosaic image comprising a plurality of four-pixel blocks, each pixel in said blocks being one of three different colors with two of said four pixels in each block being a dominant color and the other two of said four pixels being non-dominant colors, said apparatus comprising:

an input buffer for each color for storing said input space pixel values;

a coefficient kernel for each color, said coefficient kernel for said dominant color being normalized;

processing means configured for :

mapping said pixels of said dominant color from said input space to said output space by multiplying each coordinate of said input space by $1/\sqrt{2}$;

scaling coordinates of said input space to a normalized coefficient kernel by multiplying said coordinates by $1/\sqrt{2}$; and

mapping said pixels of said non-dominant colors by multiplying each coordinate of said input space by 1/2;

a convolve unit for each color for convolving said input space pixel values with said kernel coefficients of each color; and

an output buffer for storing mapped pixel values.

7. (Original)The apparatus of claim 6 further comprising processing means for sampling a 4x4 pixel block for said dominant color.

8. – 14. (Cancelled)